Quaternary Alluvium – Deposits of fluid-moved sediments composed of rounded cobbles and boulders.

Quaternary Colluvium – Talus slopes containing thick deposits of blocky angular rocks and debris, mostly on steep bases of large cliff-forming outcrops.

Oligocene Lava Dome – White to blueish-green fine-grained rhyolite. Trachytic texture with small sanidine phenocrysts (Or24-39), quartz, arfvedsonite, and iron-titanium oxides. Caprock of Casa Grande Mountain is composed entirely of this rock, as well as feeder dikes on the eastern and western flanks of Casa Grande. Feeder dikes show less oriented texture, coarser groundmass, and alteration.

Oligocene Intrusive Dikes – Fine-grained porphyritic trachytes to rhyolites of varying color and texture with sanidine phenocrysts (Or24-40), arfvedsonite, sanidine, and iron-titanium oxides. Texture varies from trachytic to a slightly oriented groundmass. Rocks are highly altered in certain localities. Dikes at the end of Lost Mine Trail are finer grained than those on Casa Grande and show a difference in groundmass texture, but composition is consistent, including Or content of feldspar phenocrysts. A set of dikes containing a dark grey to blue matrix with larger, up to 1 cm phenocrysts of micro-perthite is also present in the area.

Oligocene Boot Rock Member – Brown to maroon-grey densely welded lithic ash flow tuff and rhyolite. Multiple interbedded units of pyroclastic deposits with sediment, ash, and lithic fragments that vary in matrix color from grey, green, to brown. Large blocks in densely welded tuff matrix can be over 2 meters in length at the end of Lost Mine Trail. Unit varies greatly within mapping area, and thickens to the northeast on Casa Grande.

Oligocene Large Intrusion/Lava Dome - White to blueish fine-grained rhyolite with small phenocrysts of alkali feldspar up to 4mm. Equigranular texture with quartz, arfvedsonite, aegirine, and iron-titanium oxides. Thought to be associated with the other large intrusive bodies that surround the Basin area. Barker (2007) presents valid evidence about this perceived intrusion being a large lava dome.


Oligocene Bee Mountain Basalt – Dark grey, black, to brown fine-grained basalt to basaltic trachyandesite. Secondary minerals fill in vesicles in upper portion of the unit. Microphenocrysts of olivine and clinopyroxene visible. Thickness varies from a few meters to over 90 meters thick in the west of the mapping area. Unit thins to the east in mapping area, but is eroded at the angular unconformity on the upper portion of Lost Mine Trail.

Eocene Ash Spring Basalt – Dark purple, brown, to grey, porphyritic basalt to trachyandesitic rock with plagioclase phenocrysts up to 1.5 centimeters. Vesicular in places. Very fine-grained matrix with olivine and pyroxene microphenocrysts. Unit up to 27 meters thick in mapping area. Weathers to a brownish grey, to green, blocky soil.

Eocene-Oligocene Chisos Formation Undifferentiated Tuffaceous Sediments - Multiple alternating beds of fine to coarse grained sandstones, siltstones, limestones, including the large unit of grey sandstone conglomerate previously referred by Udden (1927) as the Crown Conglomerate. Beds are deposited between multiple lava flows and are intermittently tuffaceous.

References
